

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently amended) An infrared (IR_T) reflective flake comprising an infrared reflective core flake and an infrared transparent material which is coated on some or all of the surface of the core flake wherein the reflective core flake has a thickness of less than $0.2\text{ }\mu\text{m}$ and wherein the core flake has a surface texture in the range 0.2 to $0.4\text{ }\mu\text{m}$ and a depth to pitch ratio of less than 0.5 .
2. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 1 wherein the core flake has a DC electrical resistivity in the range 0.1 to $50\text{ }\Omega\text{cm}^{-1}$.
3. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 1 wherein the core flake is aluminium and has a thickness in the range 0.03 to $0.04\text{ }\mu\text{m}$.
4. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 1 wherein the core flake is chromium and has a thickness in the range 0.08 to $0.12\text{ }\mu\text{m}$.
5. (Cancelled)
6. (Cancelled)
7. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 1 having a diameter of 10 to $100\text{ }\mu\text{m}$.
8. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 7 wherein the diameter is in the range 10 – $50\text{ }\mu\text{m}$.
9. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 8 wherein the diameter is in the range 30 – $40\text{ }\mu\text{m}$.

10. (Currently amended) An infrared (IR_T) reflective flake as claimed in claim 1 wherein the infrared transparent material comprises a non-polar or weakly polar organic polymer that ~~optionally~~ optionally contains a coloured dye or other coloured material.
11. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 10 wherein the infrared transparent material thickness is in the range 0.2 to 2 μm.
12. (Previously presented) An infrared (IR_T) reflective flake as claimed in claims 1 wherein the infrared transparent material comprises an inorganic film that optionally contains a coloured dye or other coloured material.
13. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 1 wherein the core flake has a thickness of less than 1 nm.
14. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 13 wherein the DC resistivity is less than 10 Ω□⁻¹.
15. An infrared (IR_T) reflective flake ~~(H)~~ as claimed in claim 1 wherein the core flake comprises indium or fluorine doped tin oxide.
16. (Previously presented) An infrared (IR_T) reflective flake as claimed in claim 1 wherein the infrared transparent material completely encapsulates the core material.
17. (Previously presented) A paint formulation comprising infrared (IR_T) reflective flakes according to claim 1.
18. (Previously presented) A varnish formulation comprising infrared (IR_T) reflective flakes according to claim 1.
19. (Cancelled)
20. (New) A method of controlling radiant thermal energy comprising:
providing a coating material including infrared (IR_T) reflective flakes, wherein the infrared (IR_T) reflective flakes individually comprise an infrared reflective core flake and an

infrared transparent material which is coated on some or all of the surface of the core flake, said core flake having a thickness of less than 0.2 μm ; and
applying the coating material to a surface to form an infrared reflective coating.